

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF PENNSYLVANIA**

<b>IN RE: DOMESTIC DRYWALL ANTITRUST LITIGATION</b>	<b>CIVIL ACTION</b>
<b>THIS DOCUMENT RELATES TO:</b>  <b>Ashton Woods Holdings LLC, et al., Plaintiffs,</b>  <b>v.</b>  <b>USG Corp., et al., Defendants.</b>	<b>MDL No. 13-2437</b>  <b>15-cv-1712</b>

**MEMORANDUM RE: DAUBERT MOTIONS**

**Baylson, J.**

**April 6, 2020**

**Table of Contents**

I.	Introduction.....	2
II.	Background.....	5
	A. Elements of Price-Fixing Case.....	5
	B. Summary of Likely Presentation of Facts at Trial.....	7
	C. The Court’s Umbrella Damages Opinion.....	8
III.	Summary of Challenged Experts’ Reports.....	10
	A. David Hall’s Report.....	11
	B. Dr. Robert Willig’s Report.....	13
	C. Dr. Daniel Ingberman’s Report.....	14
	1. Dr. Ingberman’s Fact of Injury Report.....	14
	2. Dr. Ingberman’s Amount of Damages Report.....	15
IV.	Parties’ Arguments on <u>Daubert</u> Motions.....	17
	A. Homebuilder Plaintiffs’ Motion to Preclude Testimony of David Hall.....	17
	1. Hall is Unqualified.....	17
	2. Hall Fails to Use Economic Tests.....	18
	3. Hall’s Report Does Not Fit.....	19
	B. Homebuilder Plaintiffs’ Motion to Preclude Testimony of Dr. Robert Willig.....	21
	1. Cointegration.....	21
	2. First Differences.....	24
	C. Defendants’ Motion to Preclude Testimony of Dr. Daniel Ingberman.....	24
	1. Defendants’ Arguments.....	24
	2. Homebuilder Plaintiffs’ Arguments.....	26
V.	Legal Standard: Admissibility of Expert Testimony.....	27

A.	Qualification.....	28
B.	Reliability.....	29
C.	Fit.....	30
VI.	Discussion.....	31
A.	Hall’s Testimony Will Be Precluded.....	31
1.	The Pass-Through Defense.....	31
2.	<u>Hanover Shoe</u> and <u>Clayworth</u> .....	32
3.	Analysis.....	34
B.	Dr. Willig’s Testimony Will Not Be Precluded.....	37
C.	Dr. Ingberman’s Testimony Will Not Be Precluded.....	40
1.	Proving Damages at Trial.....	41
2.	Dr. Ingberman’s Market Share Testimony.....	42
VII.	Conclusion.....	46

## I. Introduction<sup>1</sup>

Plaintiffs in this action are twelve large homebuilders (“Homebuilder Plaintiffs”)<sup>2</sup> that operate in various parts of the United States. They have brought suit against several drywall manufacturers in the Northern District of California alleging a conspiracy to fix prices. The case was consolidated for pretrial proceedings in this Court by a Judicial Panel on Multidistrict Litigation (the “MDL”).

The Court separated the plaintiffs in the MDL into three groups: the Direct Purchaser Plaintiffs (“DPPs”); the Indirect Purchaser Plaintiffs (“IPPs”); and the Homebuilder Plaintiffs. The Court certified a class of DPPs, and that case settled several years ago. Although certification of

---

<sup>1</sup> Unless the name of the docket entry is relevant to this Memorandum, the Court will refer to docket entries solely by their assigned number. All ECF references are to the Ashton Woods docket, 15-1712, unless the citation states otherwise. The Class Actions docket is available at 13-2437. Reporter and Westlaw citations for opinions issued in this litigation are provided in footnotes.

<sup>2</sup> Plaintiffs are Ashton Woods Holdings LLC (“Ashton Woods”); Beazer Homes Holdings Corp. (“Beazer Homes”); CalAtlantic Group, Inc. (“CalAtlantic”); D.R. Horton Los Angeles Holding Company, Inc. (“D.R. Horton”); Hovnanian Enterprises, Inc. (“Hovnanian”); KB Home; Meritage Homes Corporation (“Meritage Homes”); M/I Homes, Inc. (“M/I Homes”); Pulte Home Corporation (“Pulte Home”); The Drees Company (“Drees”); Toll Brothers, Inc. (“Toll Brothers”); and TRI Pointe Homes, Inc. (“TRI Pointe”).

a proposed class of IPPs was denied, a settlement was subsequently reached in the IPP action as well. In addition to this case, there is one opt-out action, *Home Depot v. LaFarge*, Docket No. 18-5305, that is currently pending.

In the Homebuilder Plaintiffs action, there have been a number of pretrial proceedings, which have been extensively summarized in other memoranda. Much of the discovery that took place centered on the class actions, and pursuant to an agreement, Homebuilder Plaintiffs secured a great deal of evidence from the extensive class actions discovery.

Pending before the Court are three motions that challenge the admissibility of various expert testimony under Federal Rule of Evidence (“Rule”) 702 and Daubert:

- **[ECF 321] Homebuilder Plaintiffs’ Motion to Preclude the Testimony of Defendants’ Expert, David Hall.** Hall is a certified public accountant who gave expert opinions on the concept of downstream pass through.<sup>3</sup>
- **[ECF 320] Homebuilder Plaintiffs’ Motion to Preclude the Testimony of Defendants’ Expert, Dr. Robert Willig.** Dr. Willig is an economist who gave expert opinions on various issues including upstream and downstream pass through; the likelihood of conspiracy; and market dynamics.
- **[ECF 319] Defendants’ Motion to Preclude the Testimony of Homebuilder Plaintiffs’ Expert, Dr. Daniel Ingberman.** Dr. Ingberman

---

<sup>3</sup> There are two types of pass through that are discussed in the Daubert motions: (1) *upstream pass through*, which refers to whether Homebuilder Plaintiffs paid higher prices for drywall because of overcharges resulting from the alleged price-fixing conspiracy that were passed on to each plaintiff; and (2) *downstream pass through*, which refers to whether increases in prices of drywall could have caused increases in prices of homes sold by Homebuilder Plaintiffs to homebuyers. In other words, *upstream pass through* refers to the price increase that is passed from the manufacturer to the Homebuilder Plaintiff, and *downstream pass through* refers to the price increase that is passed from the Homebuilder Plaintiff to the ultimate homebuyer.

The Court notes that because the briefing related to Defendants’ Motion to Preclude Dr. Ingberman uses a different reference point for pass through, the upstream and downstream pass through terms take on different meaning in those papers. For purposes of this Memorandum, upstream pass through refers to the price increase passed from manufacturer to Homebuilder Plaintiff, and downstream pass through refers to the price increase passed from Homebuilder Plaintiff to homebuyer.

is an economist who gave expert opinions on the fact of Homebuilder Plaintiffs' injury and the calculation of damages.

Following extensive briefing on the Daubert motions, oral argument was delayed because the parties advised the Court that they were attempting to settle the case. Several original Defendants have since settled with Homebuilder Plaintiffs (the "Settling Defendants"), but the case continues against L&W (a subsidiary of USG Corporation) and PABCO (together, "Defendants").

The Court held oral argument on the pending Daubert motions on January 9, 2020. The parties submitted supplemental briefing after the hearing. (Docket No. 13-2437, ECF 899 (Pls.' Supp. Mem.); ECF 437 (Defs.' Supp. Mem.).) The Court requested that the parties provide an additional round of supplemental briefing answering specific questions related to the motions regarding Hall and Dr. Ingberman. (ECF 439.) The parties submitted the requested briefing thereafter. (ECF 440, Pls.' Supp. Mem. re Ingberman; ECF 441, Pls.' Supp. Mem. re Hall; ECF 442, Defs.' Supp. Mem. re Hall; ECF 443, Defs.' Supp. Mem. re Ingberman.)

Stated briefly, governing Third Circuit law<sup>4</sup> liberally permits experts to testify as long as the expert has established basic qualifications; offers reliable testimony, and gives testimony that fits the facts of the case. Applying this standard, and after considering the arguments of the parties articulated in the briefing, at oral argument, and in the supplemental materials, the Court will **GRANT** Homebuilder Plaintiffs' Motion to Preclude the Testimony of Defendants' Expert, David

---

<sup>4</sup> The Court's decision on Defendants' Motion to Dismiss Homebuilder Plaintiffs' State-Law and § 1 Sherman Act Claims held that "Third Circuit law is binding in this case on federal issues," but that "special consideration" would be given to Ninth Circuit law given that the action may be transferred back to the Northern District of California. (ECF 101 at 4, 5.) Both of the remaining Defendants, L&W and PABCO, and Homebuilder Plaintiffs have advised the Court that they consider the law of the Third Circuit, not the law of the Ninth Circuit, to be binding. (ECF 430 (L&W); ECF 431 (PABCO); ECF 432 (Homebuilder Plaintiffs).)

Hall, (ECF 321); **DENY** Homebuilder Plaintiffs' Motion to Preclude the Testimony of Defendants' Expert, Dr. Robert Willig, (ECF 320); and **DENY** Defendants' Motion to Preclude the Testimony of Homebuilder Plaintiffs' Expert, Dr. Daniel Ingberman, (ECF 319).

## **II. Background**

The factual background and chronology of this case have been summarized comprehensively in previous memoranda. (ECF 390;<sup>5</sup> ECF 397.<sup>6</sup>) The Court therefore limits its background discussion to the facts and principles that relate to the pending Daubert motions.

### **A. Elements of Price-Fixing Case**

In this antitrust price-fixing case, Homebuilder Plaintiffs have the burden to show three elements of proof.

First, Homebuilder Plaintiffs must show that Defendants conspired to fix prices. Defendants contest the existence of a conspiracy but the Court previously determined Homebuilder Plaintiffs produced sufficient evidence that, if credited by the trier of fact, would establish these Defendants engaged in an agreement to increase prices and eliminate job quotes. Therefore, the Court properly denied the Motion for Summary Judgment as to Defendants. (ECF 397.)

Although the price of drywall increased each year from 2012 to 2015, the Court limited the conspiracy period to the 2011 and 2012 conduct that led to "the price increases for 2012 and 2013." (ECF 93 at 6.) The Court found that the facts alleged were "insufficient to set out any plausible

---

<sup>5</sup> Reporter Citation: In re Domestic Drywall Antitrust Litig., 399 F. Supp. 3d 280 (E.D. Pa. 2019) (Memorandum re Motion for Summary Judgment (Choice-of-Law)) (Baylson, J.).

<sup>6</sup> Westlaw Citation: In re Domestic Drywall Antitrust Litig., MDL No. 13-2437, Civil Action No. 15-cv-1712, 2019 WL 3254090 (E.D. Pa. July 19, 2019) (Memorandum re USG Defendants' Motion for Summary Judgment) (Baylson, J.).

claims based on the 2014 and 2015 price increases.”<sup>7</sup> (Id.) Despite this ruling, Homebuilder Plaintiffs (with expert support) asserted that the effects of the illegal price-fixing agreement continued in calendar years 2014 and 2015. The Court has determined that Homebuilder Plaintiffs may include proof of damages for those years. See id. at 8 n.5 (“The parties should not confuse [the conspiracy] window with the possibly different time period for the calculation of damages. It is possible that Homebuilder Plaintiffs . . . may be able to prove damages for a broader time period than the scope of discovery and liability.”).

Second, Homebuilder Plaintiffs have the burden of proving the fact of injury. The Court determined that California law will apply to Homebuilder Plaintiffs’ state antitrust claims arising from (a) purchases made in states that repealed the rule of Illinois Brick Co. v. Illinois, 431 U.S. 720 (1977), barring indirect purchasers from recovering against antitrust violators (“repealer states”), and (b) purchases made in states that did not repeal Illinois Brick (“nonrepealer states”). (ECF 400 ¶ 10.)<sup>8</sup>

Third, Homebuilder Plaintiffs must prove compensable injuries. For the reasons discussed in the Court’s October 3, 2019 Memorandum, Homebuilder Plaintiffs are permitted to proceed on an “umbrella” theory of damages. That is, they may seek damages for prices that were charged by

---

<sup>7</sup> The Court summarized the 2012 and 2013 price increases in the Memorandum re Defendants’ Motions for Summary Judgment in the Class Actions. (Docket No. 13-2437, ECF 351 at 84–88 (¶¶ 100, 111, 112, 115, 116, 120, 121); 100–105.) Reporter Citation: In re Domestic Drywall Antitrust Litig., 163 F. Supp. 3d 175, 223–26, 232–35 (E.D. Pa. 2016) (Baylson, J.).

The Court summarized the 2014 and 2015 price increases in the Memorandum re Defendants’ Motion to Dismiss Homebuilder Plaintiffs’ Claims Based on 2014 and 2015 Price Increases. (ECF 93 at 3–4.) Westlaw Citation: In re Domestic Drywall Antitrust Litig., MDL No. 13-2437, Civil Action No. 15-cv-1712, 2016 WL 3453147, at \*2 (E.D. Pa. June 22, 2016) (Baylson, J.).

<sup>8</sup> Westlaw Citation: In re Domestic Drywall Antitrust Litig., MDL No. 13-2437, Civil Action No. 15-cv-1712, 2019 WL 3326030, at \*2 (E.D. Pa. July 24, 2019) (Baylson, J.).

drywall sellers that were not involved in the price-fixing conspiracy, but whose prices were artificially high due to the alleged conspiratorial behavior of Defendants and Settling Defendants. (ECF 414, Umbrella Damages Opinion at 22.)<sup>9</sup>

**B. Summary of Likely Presentation of Facts at Trial**

Before examining the challenged expert opinions that are the subject of the pending Daubert motions, it is important to summarize how the facts are likely to be presented at trial. This will provide context for the following analysis of the admissibility of the expert testimony proffered by the parties.

Each Homebuilder Plaintiff has presented evidence, including deposition testimony, of how they purchased drywall. The exhibits attached to Homebuilder Plaintiffs' separate statement of material facts in support of their opposition to Defendants' Motion for Partial Summary Judgment on Umbrella Damages provide some of this evidence.<sup>10</sup>

At trial, the owners or managers of Homebuilder Plaintiffs will testify from first-hand personal experience and business records about the volume of drywall purchased by them from different sources. The evidence in the record shows that Homebuilder Plaintiffs mainly purchased drywall from intermediaries, either distributor intermediaries (i.e., direct purchasers of drywall that eventually sold to Homebuilder Plaintiffs) or installer intermediaries (i.e., direct purchasers that provided drywall to Homebuilder Plaintiffs as part of an installation service, also known as turnkey installers). The Court's Umbrella Damages Opinion overviews the declarations of these intermediate purchasers regarding the extent to which they passed on the cost increases

---

<sup>9</sup> Westlaw Citation: In re Domestic Drywall Antitrust Litig., MDL No. 13-2437, Civil Action No. 15-cv-1712, 2019 WL 4918675, at \*12 (E.D. Pa. Oct. 3, 2019) (Baylson, J.).

<sup>10</sup> These exhibits are filed under seal at ECF 308, ECF 308-1, ECF 308-2, ECF 308-3, ECF 308-4, ECF 308-5, and ECF 308-6.

implemented by Defendants. (Umbrella Damages Opinion at 8–9, Appendix.) As Homebuilder Plaintiffs operate all over the United States, it is likely that the testimony will vary somewhat as to the individual methodology of purchase. This variation may include testimony about participation in a special regional purchase program. The volume of drywall purchased will not be difficult to prove.

From the evidence gathered in the merits discovery stage of this MDL, in which Homebuilder Plaintiffs thoroughly participated, Homebuilder Plaintiffs will be able to present evidence that would permit a jury to find there was an agreement to fix prices for certain periods of time. Homebuilder Plaintiffs will also be able to present evidence based on their business records and opinions of experts that would allow the trier of fact to determine the amount of the illegal overcharge.

### **C. The Court’s Umbrella Damages Opinion**

It will also be helpful to review the Court’s most recent substantive memorandum in this case, which analyzed one of the theories of damages that is likely to be asserted by Homebuilder Plaintiffs at trial. The memorandum addressed Defendants’ Motion for Partial Summary Judgment on Umbrella Damages, which sought a determination that Homebuilder Plaintiffs cannot seek damages for price increases that were charged by nonconspiring manufacturers (“umbrella damages”) on the theory that the prices of those nonconspiring manufacturers were artificially inflated as a result of Defendants’ anticompetitive conduct. The Court previously determined that California law applied to the state law claims and, interpreting California’s Cartwright Act, rejected Defendants’ contention that umbrella damages are categorically unavailable. (Umbrella Damages Opinion at 22.)



There are a number of distinctions that the parties and the Court have drawn over the course of this litigation. Before deciding whether and how Homebuilder Plaintiffs could seek umbrella damages, the Court had to assess the implications of two of those distinctions: the distinction between indirect and direct purchasers, and the distinction between damages claims brought under federal law and damages claims brought under state law.

The first distinction involved the difference between indirect and direct purchasers. Under Supreme Court precedent, *indirect* purchasers such as Homebuilder Plaintiffs are barred from seeking damages for antitrust violations under federal law.<sup>11</sup> (Umbrella Damages Opinion at 12–13.) More specifically, in Illinois Brick, the Supreme Court held that an indirect purchaser cannot use the direct purchaser’s pass on of an overcharge as the basis for damages. 431 U.S. at 730.

However, Illinois Brick only governs federal antitrust claims. Following Illinois Brick, a number of states passed laws that limited the Supreme Court’s holding by allowing indirect purchasers to recover for antitrust claims brought under *state* law. These statutes, known as “Illinois Brick repealer” statutes, authorize indirect purchasers to recover for antitrust claims brought under state law. California passed one such statute, the Cartwright Act. The Cartwright Act is important in the context of this case because, before passing on umbrella damages, the Court had analyzed choice of law and determined that California law would apply to *all* of Homebuilder Plaintiffs’ state law claims. (ECF 400 ¶ 10.)

---

<sup>11</sup> There is one limited exception to the Court’s characterization of Homebuilder Plaintiffs as indirect purchasers. Two of the Homebuilder Plaintiffs, Ashton Woods and D.R. Horton, seek damages from L&W *directly*. These direct purchaser claims for damages are asserted under federal law. Pursuant to the Court’s September 27, 2019 Order, (ECF 413), Homebuilder Plaintiffs submitted documentary evidence indicating that these Plaintiffs purchased directly from L&W, (ECF 417 at 4.)

The second distinction, therefore, involves the difference between damages claims brought under federal law and damages claims brought under state law. Because Homebuilder Plaintiffs did not seek umbrella damages under the Sherman Act, the Court did not reach Defendants' arguments regarding the unavailability of umbrella damages under federal law. (Umbrella Damages Opinion at 12 n.7.) And the fact that Homebuilder Plaintiffs could proceed with their antitrust claims under California law sharpened, but did not answer, the question of whether umbrella damages are available under the Cartwright Act. To resolve *that* question, the Court looked to California case law and determined that the Cartwright Act does not bar umbrella damages as a matter of law. This meant that Homebuilder Plaintiffs can proceed on a theory of umbrella damages, but need to adduce sufficient evidence to get the theory to the jury.

In summary, although Illinois Brick forbids claims for indirect purchases that are brought under federal law, Homebuilder Plaintiffs have made clear that they intend to pursue damages for indirect purchases under California's Cartwright Act. Since the Court found that the Cartwright Act does not categorically bar umbrella damages, Homebuilder Plaintiffs may pursue and present evidence on this theory at trial, along with evidence of more typical theories of antitrust damages.

### **III. Summary of Challenged Experts' Reports**

The Daubert motions reference the reports and conclusions of four experts: Defendants' experts David Hall and Dr. Robert Willig; and Homebuilder Plaintiffs' experts Dr. Daniel Ingberman and Dr. Louis Wilde. Only three of the experts are subject to Daubert challenges: (A) Defendants' expert David Hall; (B) Defendants' expert Dr. Robert Willig; and (C) Homebuilder Plaintiffs' expert Dr. Daniel Ingberman. A summary of the conclusions and findings of these experts' reports follows.

### **A. David Hall's Report**

Hall's Report analyzes the extent to which Homebuilder Plaintiffs passed on the increased costs of drywall resulting from the price-fixing conspiracy and responds to the report of Homebuilder Plaintiffs' expert Dr. Wilde.<sup>12</sup> The dispute between Dr. Wilde and Hall concerns the downstream pass through question: were Homebuilder Plaintiffs able to pass on the increased drywall costs to homebuyers? Dr. Wilde answers the question in the negative, while Hall answers affirmatively.

According to Dr. Wilde's analysis of economic theory, Homebuilder Plaintiffs "could not" have passed on the increase in the cost of drywall, because Homebuilder Plaintiffs do not set prices based on construction costs but rather use "the demand side of the market" to inform pricing strategies. (Wilde Report ¶¶ 7, 27.)<sup>13</sup> Wilde concludes that "once the decision is made to proceed with a project, there is no longer any relationship between costs and sales prices" and notes that this pricing strategy is consistent with neoclassical economic theory. (*Id.* ¶ 20.)

In contrast to Dr. Wilde's theoretical approach, Hall's forensic accounting analysis involves a review of publicly available data of average annual construction costs, average annual costs of drywall, and total sales prices, as well as a survey of statements in Defendants' public

---

<sup>12</sup> Defendants do not make a Daubert challenge to the admissibility of the opinion of Homebuilder Plaintiffs' expert Dr. Wilde. Homebuilder Plaintiffs explained that they "only provided an expert report addressing downstream pass-through out of an abundance of caution so as to avoid being precluded from doing so in the unlikely event the Court at a later date determines that a pass-through defense is available." (ECF 315 at 5 n.3.)

<sup>13</sup> Dr. Wilde's report, dated December 22, 2017, is available at Exhibit B to Defendants' Motion to Preclude Hall. The Wilde Report, which is filed under seal, is available at pp.5–51 of ECF 315-12.

filings, deposition testimony, and internal documents regarding pricing.<sup>14</sup> Hall declines to opine on Wilde's economic theory and instead summarizes the record evidence contradicting the conclusions of Wilde's economic analysis. In support of his conclusion that empirical evidence indicates Homebuilder Plaintiffs successfully passed on the increased drywall costs to homebuyers, Hall makes five conclusions:

1. The pass-through of increasing construction costs—including drywall costs—to home purchasers is more likely to occur in a growing and favorable homebuilding environment. Such an environment existed in the U.S. homebuilding industry from at least 2012 through 2015 when the industry experienced a resurgence that included significant increases in new home starts, average selling prices, and profitability.
2. The drywall cost increases at issue in this litigation—which occurred during 2012 through 2015—occurred during a period when the homebuilding industry generally experienced increasing construction materials and labor costs.
3. [Homebuilder] Plaintiff[s]' financial statements reflect significant growth in new home sales, average home prices, revenues, gross profits, and gross margins during 2012 through 2015.
4. Contrary to Dr. Wilde's opinion, there is substantial evidence that during 2012–2015, [Homebuilder] Plaintiff[s] considered construction costs when setting new home prices. This evidence indicates that [Homebuilder] Plaintiff[s] successfully passed through the increased construction costs—including drywall—to home buyers.
5. [Hall] disagree[s] with Dr. Wilde's opinions that estimating the impact of pass-through is exceptionally difficult if not impossible and that there is not a causal connection between increased construction costs—including drywall costs—and increased new home prices.

(Hall Report at 11.)

---

<sup>14</sup> The Hall Report, dated January 26, 2018, is available at Exhibit A to Homebuilders Plaintiffs' Memorandum in Support of their Motion to Preclude David Hall. The Hall Report, which is filed under seal, is available at pp.42–65 of ECF 315; pp.1–24 of ECF 315-1 at 1–24; and pp.1–18 of ECF 315-2.

## **B. Dr. Robert Willig's Report**

Dr. Willig submitted two reports in this litigation. Each responds to one of Dr. Ingberman's reports. Homebuilder Plaintiffs' Daubert challenge targets testimony based on one portion of Dr. Willig's second report.

The first report, submitted January 26, 2018, largely responds to Dr. Ingberman's evidence on whether collusion would have affected the price of drywall. Dr. Willig concludes, based on economic theory and empirical evidence, that the price increases seen in the market were more likely the result of oligopoly and external market forces than collusion. Homebuilder Plaintiffs do not seek to preclude Dr. Willig from testifying regarding the contents of this first report.

Dr. Willig's second report ("Willig Report II"),<sup>15</sup> submitted February 26, 2018, responds to Dr. Ingberman's evidence on damages. The report concludes that multiple flaws in Dr. Ingberman's model undermine his damages estimates.

Relevant here, after arguing that Dr. Ingberman's forecasting model is flawed, (Willig Report II ¶¶ 19–62), Dr. Willig develops his own forecasting model which he claims is superior, (id. ¶¶ 63–74). Specifically, Dr. Willig's model does not use the "first differences" methodology that Dr. Ingberman uses, meaning, Dr. Willig asserts, that his model is more efficient than Dr. Ingberman's. (Id. ¶¶ 60–63.) Applying his non-first-differences model, he finds that actual drywall prices are consistent with demand and inconsistent with the alleged conspiracy. (Id. ¶¶ 72–73.) Dr. Willig then conducts robustness tests and concludes that his model is robust. (Id. ¶ 74.)

---

<sup>15</sup> Willig Report II, dated February 26, 2018, is available at Exhibit A to Homebuilder Plaintiffs' Memorandum in Support of their Motion to Preclude Dr. Robert Willig. The Willig II Report, which is filed under seal, is available at pp.22–130 of ECF 413.

Dr. Willig's model is a partial basis for some of his conclusions that Dr. Ingberman's model is unreliable and that the alleged conspiracy did not affect drywall prices. (Id. ¶¶ 8, 15.)

### **C. Dr. Daniel Ingberman's Report**

Dr. Daniel Ingberman drafted two damages report on behalf of Homebuilder Plaintiffs. In his first report, Dr. Ingberman assumed that Defendants colluded to raise the price of drywall, and evaluated whether Homebuilder Plaintiffs paid an artificially higher price for drywall as a result.<sup>16</sup> (Ingberman FoI ¶ 11.) In his second report, Dr. Ingberman estimated the amount of damages each Homebuilder Plaintiff sustained as a result of the price increases.<sup>17</sup> (Ingberman AoD ¶ 4.)

#### **1. Dr. Ingberman's Fact of Injury Report**

Dr. Ingberman applies economic theory about price-fixing schemes and predicts that collusive price increases in the drywall market would cause Homebuilder Plaintiffs to pay an artificially high price for drywall. (Ingberman FoI ¶ 14.) Based on several market characteristics, such as Defendants' control over the market, (id. ¶¶ 158, 168–69), and Defendants' elimination of job quotes, (id. ¶¶ 198–99), Dr. Ingberman concludes that a conspiracy to raise prices would have been effective here, (id. ¶ 141.)

Dr. Ingberman then considers whether Homebuilder Plaintiffs purchased their drywall from distribution channels that should be expected to have passed through Defendants' price increases to Homebuilder Plaintiffs. (Id. ¶ 215.) General characteristics of the distributor and turnkey channels in the drywall market suggest intermediate distributors would pass on price

---

<sup>16</sup> The Fact of Injury ("FoI") Report, dated December 22, 2017, is available at Exhibit 4 to Defendants' Memorandum in Support of their Motion to Preclude Dr. Daniel Ingberman. The FoI Report, which is filed under seal, is available at ECF 323-4.

<sup>17</sup> The Amount of Damages ("AoD") Report, dated January 26, 2018, is available at Exhibit 5 to Defendants' Memorandum in Support of their Motion to Preclude Dr. Daniel Ingberman. The AoD Report, which is filed under seal, is available at ECF 323-5.

increases to homebuilders. (Id. ¶¶ 221–22, 242–43.) In fact, some of the distributors in these channels confirmed that they had done so. (Id. ¶¶ 250–65, 267–69.) Dr. Ingberman ultimately concludes that, assuming Defendants colluded, any price increases should be expected to have fully passed through to Homebuilder Plaintiffs. (Id. ¶ 271.)

## **2. Dr. Ingberman’s Amount of Damages Report**

After concluding that Defendants’ price increases should be expected to have been passed through to Homebuilder Plaintiffs, Dr. Ingberman estimates the total overcharges Homebuilder Plaintiffs paid as a result of Defendants’ price increases. Part of Dr. Ingberman’s report is highly technical.

From the Court’s review, Dr. Ingberman appears to have calculated Homebuilder Plaintiffs’ damages using a regression that compared drywall prices from 2012–2015, with drywall prices during a period in which prices were untainted by collusion. (Ingberman AoD ¶¶ 9, 16–17.) Controlling for many factors, Dr. Ingberman’s regression ultimately deduces that, on average, estimated overcharges on drywall sold to direct purchasers ranged from a low of fifteen percent in 2012 to a high of thirty-five percent in 2015. (Id. ¶¶ 12, 32–42.)

Dr. Ingberman then ran another regression to estimate how much of Defendants’ overcharges passed through from intermediate distributors to Homebuilder Plaintiffs. (Id. ¶ 75.) Under a “top-and-bottom” approach, Dr. Ingberman’s model was unable to reject a dollar-for-dollar pass through rate, or a percent-for-percent pass through rate. (Id. ¶¶ 93–94.) Ultimately, Dr. Ingberman’s regression estimates Homebuilder Plaintiffs’ damages at between \$233 million and \$277 million. (Id. ¶ 111.)

Relevant to Defendants’ Motion to Preclude Dr. Ingberman, the Amount of Damages report also calculates each Defendant’s share of these damages. (Id. ¶¶ 110, Ex. 9A–9E.) In

Exhibit 9C, Dr. Ingberman appears to estimate how much drywall each Homebuilder Plaintiff bought from each manufacturer based on that Defendant's market share. Homebuilder Plaintiffs state that this one-page exhibit shows each manufacturer's actual sales for the twelve Homebuilder Plaintiffs in the years 2012–2015, broken down by drywall manufacturer (including Defendants). The Exhibit includes data for CertainTeed and Georgia Pacific, which, as discussed in the Umbrella Damages Opinion, were situated differently than other manufacturers. Although CertainTeed had been sued, the Court granted summary judgment in its favor in the class actions, (Docket 13-2437, ECF 352 ¶ 2), and Homebuilder Plaintiffs voluntarily dismissed it in this action, (ECF 178.) Homebuilder Plaintiffs never sued Georgia Pacific.

Dr. Ingberman's report states his work as to Exhibit 9C as follows:

In Exhibit 9C, purchases are allocated among wallboard manufacturers based on state-level quantity sales shares for the period January 2012 through July 2013, the longest period during 2012–2015 for which *transaction data are available for all wallboard manufacturers*. Temple-Inland's sales share is added to Georgia-Pacific's sales share beginning in August 2013, subsequent to its acquisition by Georgia-Pacific. For Drees' Nashville and Cincinnati/Northern Kentucky divisions, CertainTeed is assumed to have 100% market share.

(Id. Notes to Exhibit 9A–9E (emphasis added).) According to Homebuilder Plaintiffs, to calculate the figures in Exhibit 9C, Dr. Ingberman:

- (i) [T]ook the undisputed manufacturer data for the longest time period available (covering sales from January 2012 through July 2013, a significant portion of the alleged conspiracy and prior to Temple-Inland selling its drywall business to Georgia-Pacific);
- (ii) [S]orted the manufacturer sales data by state to determine the market share of each manufacturer on a state-by-state basis; and
- (iii) [H]aving already separately calculated the amount of drywall purchased by each Plaintiff in each state (calculations which have not been challenged in any motion by Defendants), Dr. Ingberman used the state-by-state market share of each manufacturer to estimate the amount of drywall purchased by each Plaintiff in each of the states in which they purchase drywall.



(Pls.' Supp. Mem. re Ingberman at 2 (footnote omitted).) In other words, to estimate the figures in Exhibit 9C, Dr. Ingberman appears to have calculated each Defendant's share of the direct purchasing distributor market, and used that same number to estimate how much of each Defendant's drywall Homebuilder Plaintiffs bought when they purchased drywall from intermediate distributors. (Ingberman AoD Notes to Ex. 6, 8, 9A–9E.)

#### **IV. Parties' Arguments on Daubert Motions**

##### **A. Homebuilder Plaintiffs' Motion to Preclude Testimony of David Hall<sup>18</sup>**

Homebuilder Plaintiffs' Motion makes arguments for exclusion under all three of the Third Circuit's trilogy of Rule 702 requirements—qualification, reliability, and fit. Homebuilder Plaintiffs argue that the testimony of Hall should be precluded because (1) he is not qualified; (2) his failure to use economic test makes his testimony unreliable; and (3) he does not offer scientific, technical, or specialized knowledge. (Mot. re Hall at 3.) Defendants respond in opposition to all three of Plaintiffs' reasons. (ECF 335, Opp'n re Hall at 1.) Homebuilder Plaintiffs reply in support of their Motion and respond to Defendants' arguments. (ECF 345, Reply re Hall at 1.)

##### **1. Hall is Unqualified**

First, Homebuilder Plaintiffs argue that Hall is not qualified in this matter because he is an accountant not an economist. (Mot. re Hall at 7–8.) Since Hall lacks training in fundamental principles of antitrust, according to Homebuilder Plaintiffs, he lacks the knowledge and qualifications necessary to provide economic analysis, and therefore does not have the specialized expertise required of a witness qualified as an expert under Rule 702. (Id. at 10.) Defendants

---

<sup>18</sup> Homebuilder Plaintiffs' Motion to Preclude the Testimony of Defendants' Expert, David Hall is filed at ECF 321. The sealed Memorandum in Support of the Motion is filed at ECF 315. The Court will hereafter refer to Homebuilder Plaintiffs' Memorandum as "Mot. re Hall."

respond that Hall has expressed his opinion as a forensic accountant and does not purport to opine on any of Dr. Wilde's economic theories. (Opp'n re Hall at 14–15.)

## **2. Hall Fails to Use Economic Tests**

Second, Homebuilder Plaintiffs argue that Hall's testimony should be precluded because his methods lack reliability. (Mot. re Hall at 16.) All three of Homebuilder Plaintiffs' reasons for why Hall's analysis is not reliable seem to revolve around the first reliability factor set forth by the Third Circuit: the testability of the expert's method and hypothesis.

Homebuilder Plaintiffs initially argue that Hall "did not attempt to perform any sort of econometric analysis . . . to demonstrate that home prices increased as a result of increased drywall costs and not some other cost or other supply and demand factor." (Id. at 18.) In other words, according to Homebuilder Plaintiffs, Hall assumed causation without attempting to determine what home sale prices would have been but for the drywall cost increases, (id. at 19), and he failed to account for other factors that may have led to the increase in home sale prices, (id. at 20.) Defendants respond that Hall did not assume causation; but rather, analyzed direct evidence that included public investor statements, deposition testimony, and internal documents that led him to the conclusion that "a relationship between [Homebuilder] Plaintiffs' construction costs and the prices they charge[d] to their customers" existed. (Opp'n re Hall at 24.) Defendants argue that Hall's Opinion 4, which is discussed at pp.33–61 of his Report, demonstrates that Hall conducted an extensive analysis on causation. (Id.)

Homebuilder Plaintiffs also critique Hall for failing to conduct any analyses to test the validity of his opinions. (Mot. re Hall at 24.) Homebuilder Plaintiffs take issue with Hall's use of statements he sourced from public filings, earnings calls, and depositions, arguing that Hall "frequently ignores [the] context in which these statements were made" and that this demonstrates

a “fundamental misunderstanding” of pass through. (Id. at 25, 26.) Defendants respond that Homebuilder Plaintiffs’ expert Dr. Wilde “relied on . . . record evidence [similar to the evidence relied on by Hall] in support of his economic theories.” (Opp’n re Hall at 30.)

Finally, Homebuilder Plaintiffs argue that Hall ignored real-world evidence showing that his assumption “that drywall price increases must have been passed through because Plaintiffs continued to profit during [the conspiracy] period is not only purely speculative, it is farfetched.” (Mot. re Hall at 30.) Homebuilder Plaintiffs highlight two pieces of evidence that, in their view, Hall erroneously ignored: the fact that new home sales constitute a small fraction—approximately ten percent—of the market for single family homes (sales of existing single-family homes comprise the remaining ninety percent of the market for single family homes); and the fact that Homebuilder Plaintiffs “price to market” (i.e., price their homes as high as the market will allow). (Id. at 31.) Homebuilder Plaintiffs argue that Hall’s disregard of these facts demonstrates the unreliability of his opinion, because these facts establish that “more than 90% of the single-family home market does not consider construction costs in determining the market price of a home, [so] it is simply implausible that Homebuilder Plaintiffs would be able to raise the market price of each and every home they sold in 2012 through 2015 by the amount of the drywall cost increase.” (Id.) Defendants respond that Homebuilder Plaintiffs’ argument “is simply another cross-examination argument dressed up as a Daubert challenge.” (Opp’n re Hall at 30.)

### **3. Hall’s Report Does Not Fit**

Third, Homebuilder Plaintiffs argue that Hall’s report does not offer any scientific, technical, or specialized analysis, but rather is a third-party recitation of publicly available financial documents. (Mot. re Hall at 32–33.) According to Homebuilder Plaintiffs, “[t]he only expertise . . . Hall . . . employs . . . is expertise in compiling and presenting data, not in rigorously

and scientifically analyzing that data as Daubert requires.” (Id. at 34.) Defendants respond that Homebuilder Plaintiffs’ claim “is false,” because Hall’s forensic accounting analysis of “hundreds of annual and quarterly public filings, earnings press releases, conference call transcripts, and internal financial records” required him to “make numerous professional accounting judgments.” (Opp’n re Hall at 31.)

More fundamentally, the parties debate whether Hall’s testimony aids the trier of fact since the purpose of his opinion is to support a defense that, according to Homebuilder Plaintiffs, is not available. Homebuilder Plaintiffs contend that Hall’s testimony, which focuses on the extent of downstream pass through, is not relevant because “a purported pass-through defense is not available to Defendants in this action, where there is absolutely no risk of duplicative recovery to indirect purchasers.” (Mot. re Hall at 5 n.3). Defendants respond that the legal availability of the pass-through defense should have been raised at summary judgment, and that the Court should not consider the issue in the context of the pending Daubert motion. (Opp’n re Hall at 24 n.4.) Homebuilder Plaintiffs reply that Defendants should have sought to “limit their liability based on a purported pass-through defense in a summary judgment motion.”<sup>19</sup> (Reply re Hall at 2 n.1.)

---

<sup>19</sup> The Court permitted the parties to submit separate supplemental briefing on the availability of the pass-through defense following oral argument on the Daubert motions, which resolved these timeliness objections. As discussed in subsection VI.A., the legal availability of a defense based on pass through is dispositive to Homebuilder Plaintiffs’ Motion challenging the admissibility of Hall’s testimony.

## **B. Homebuilder Plaintiffs' Motion to Preclude Testimony of Dr. Robert Willig<sup>20</sup>**

Homebuilder Plaintiffs attack the reliability of Dr. Willig's forecasting model.<sup>21</sup> They contend that for the forecasting model to be reliable, either Dr. Willig's data must be "cointegrated," or he must use "first differences" analysis as a robustness check or corrective technique. (Mot. re Willig at 5–8.) They argue that because Dr. Willig did not demonstrate cointegration to their satisfaction, and he did not use the first differences method, his forecasting model is unreliable and should be discarded. (*Id.* at 7–9.)

### **1. Cointegration**

Homebuilder Plaintiffs' first line of attack concerns the *cointegration*<sup>22</sup> of Dr. Willig's data. The parties agree that if Dr. Willig's data are not cointegrated, his forecasting model is

---

<sup>20</sup> Homebuilder Plaintiffs' Motion to Preclude the Testimony of Defendants' Expert, Dr. Robert Willig is filed at ECF 320. The sealed Memorandum in Support of the Motion is filed at ECF 314. The Court will hereafter refer to Homebuilder Plaintiffs' Memorandum as "Mot. re Willig."

<sup>21</sup> Aside from their dispute as to the admissibility of the forecasting model, the parties dispute what the purported inadmissibility of the forecasting model would mean for the rest of Dr. Willig's testimony. Homebuilder Plaintiffs insist that the forecasting model is intertwined with the entire February 26 report such that the forecasting model cannot be excluded without excluding the entire report. Defendants respond that the forecasting model is a limited portion of the report, and the effect of its inclusion could be cabined. Because the forecasting model is admissible, it is not necessary to reach this issue.

<sup>22</sup> Cointegration is a characteristic some nonstationary datasets have that allows analysts to use ordinary least squares regressions without using other corrective techniques to address the nonstationarity.

*Nonstationary* data is data whose underlying properties change over time. (*Id.* at 5.) For example, many facts about the drywall market might change with overall national economic conditions; the drywall market is therefore nonstationary with respect to national economic conditions. Typically, an analyst working with nonstationary data must use one of several analytical techniques to control for nonstationarity. (*Id.*) There is no dispute that Dr. Willig's data are nonstationary. (*Id.*)

However, certain nonstationary datasets are *cointegrated*. Cointegration means that the data respond similarly enough to the source of nonstationarity that the nonstationarity does not ultimately undermine the regression. (*Id.* at 5–6.) Homebuilder Plaintiffs borrow the example of "a drunkard and her leashed dog walking on the street. The drunkard's path may resemble a

unreliable. (ECF 338, Opp’n re Willig at 1.) Dr. Willig concluded that his data were cointegrated based on two standard tests for cointegration—the “Kao” and “Pedroni” tests. (Willig Report II ¶¶ 61.) Homebuilder Plaintiffs agree that the Kao and Pedroni tests are sometimes valid tests for cointegration. (Mot. re Willig at 9–10.) However, they argue that in certain circumstances, the tests will spuriously report cointegration. (Id. at 10–12.) Specifically, based on Dr. Willig’s own testimony, they argue that the Kao and Pedroni tests may be “skewed towards finding” cointegration because his data shows “signs” of a characteristic called “codependency.”<sup>23</sup> (Id. (quoting Willig Dep.).)

Following Dr. Ingberman’s deposition, Dr. Willig found that his data passed a third cointegration test (the “Westerlund” test) which is not reflected in his reports. (Mot. re Willig at 11 n.2.) Dr. Willig ran the Westerlund test to address Dr. Ingberman’s critique of his (Dr. Willig’s) use of the Kao and Pedroni tests. (Id.) Homebuilder Plaintiffs argue that Dr. Willig cannot use this post-hoc research to supplement or shore up his reports. (Id.) “In any event, Willig admitted that . . . the Westerlund test ‘*doesn’t give perfect results . . .*’” (Id. (quoting Willig Dep.).)

Defendants have three responses.

First, they argue that economic theory and “common sense” provide that supply, demand, and price should be cointegrated. (Opp’n re Willig at 5–7.) The econometrics literature recognizes

---

random walk (and therefore appear to be nonstationary) and so does the path of her dog. But, because they are walking forward together and in more or less the same direction, they will not ‘deviate’ too far from one another and their paths can therefore be considered cointegrated.” (Id. at 6.)

<sup>23</sup> Homebuilder Plaintiffs do not define codependency. Per Defendants’ opposition brief, “In the context of the regressions in this case, which use data at the state-month level to regress price on supply and demand factors, cross-sectional dependence [codependency] could, but does not necessarily, arise if the unexplained portion of prices are correlated across states.” (Opp’n re Willig at 8 n.4.)

that theory can provide evidence of cointegration. (Id. at 6 n.3.) Moreover, empirically, price and demand are “highly correlated” in this industry, which provides support for cointegration. (Id. at 6 (quoting Willig Dep.).)

Second, notwithstanding Homebuilder Plaintiffs’ contrary excerpts of his testimony, Dr. Willig largely stood behind the effectiveness of the Kao and Pedroni tests. (Opp’n re Willig at 8–9.) Moreover, Homebuilder Plaintiffs provide no evidence of codependency in Dr. Willig’s data, so any codependency-based critique is “purely hypothetical.” (Id. at 8.) Boiled down, “the differences between Dr. Willig and Dr. Ingberman over the Kao and Pedroni tests represent a disagreement over mainstream econometric tools.” (Id. at 9.) And “[t]his is a dispute that must go to the jury, not a subject for a Daubert motion.” (Id. at 10 (citing In re TMI Litig., 193 F.3d 613, 665 (3d Cir. 1999), amended, 199 F.3d 158 (3d Cir. 2000)).)

Finally, Defendants argue that Dr. Willig’s supplemental use of the Westerlund test to support his finding of cointegration was appropriate. In response to Homebuilder Plaintiffs’ argument that the Westerlund test is inadmissible because Dr. Willig admitted it is not “perfect,” they argue that “[t]he grounds for the expert’s opinion merely have to be good, they do not have to be perfect,” (Opp’n re Willig at 11–12 (quoting In re Paoli R.R. Yard PCB Litig., 35 F.3d 717, 744 (3d Cir. 1994)).) And they respond to Homebuilder Plaintiffs’ argument that the Westerlund test comes too late for admissibility by arguing that it is expert rebuttal evidence under Federal Rule of Civil Procedure 26(a)(2)(D)(ii).<sup>24</sup> (Opp’n re Willig at 12.)

---

<sup>24</sup> “Absent a stipulation or court order, the disclosures must be made: . . . (ii) if the evidence is intended solely to contradict or rebut evidence on the same subject matter identified by another party under Rule 26(a)(2)(B) or (C), within 30 days after the other party’s disclosure.” Although this material was disclosed more than thirty days after Dr. Ingberman’s critique was revealed, “both parties’ experts disclosed additional work they had done in response to the opposing expert’s opinions on the date of their depositions.” (Opp’n re Willig at 12.)

Homebuilder Plaintiffs reply that this first response, from theory, proves too much. (ECF 347, Reply re Willig at 3–6.) The second response, they argue, mistakenly puts the burden on Homebuilder Plaintiffs to rebut Dr. Willig’s testimony when the burden actually falls on Dr. Willig to demonstrate the reliability of his testimony. (Id. at 10.) And finally, they argue that the Westerlund test is immaterial, unreliable, and does not actually support Dr. Willig’s position that his data are cointegrated, particularly when run with intermediate-term rather than long-term lags. (Id. at 9–11.)

## **2. First Differences**

Homebuilder Plaintiffs argue that Dr. Willig should have used a “first differences” regression model either to correct for the data’s nonstationarity, or at the least as a robustness check on his non-first-differences regression. (Mot. re Willig at 7, 13–16.) They argue that because he failed to do so, his report is unreliable. (Id. at 15–16.)

Defendants argue in response that Dr. Willig was entitled to conclude that his data were cointegrated based on his use of the Kao, Pedroni, and Westerlund tests, and there was no need to use the first differences method as a robustness check. (Opp’n re Willig at 13–15.)

## **C. Defendants’ Motion to Preclude Testimony of Dr. Daniel Ingberman<sup>25</sup>**

### **1. Defendants’ Arguments**

Defendants challenge the reliability of Dr. Ingberman’s method of estimating market share to apportion damages. Defendants argue that Dr. Ingberman’s share of sales estimates for the homebuilder market extrapolates from Defendants’ share of the direct purchasing distributor

---

<sup>25</sup> Defendants’ Motion to Preclude the Testimony of Homebuilder Plaintiffs’ Expert, Dr. Daniel Ingberman is filed at ECF 319. The sealed Memorandum in Support of the Motion is filed at ECF 323. The Court will hereafter refer to Homebuilder Plaintiffs’ Memorandum as “Mot. re Ingberman.”



market without any basis for doing so. (Mot. re Ingberman at 9–10.) Specifically, Defendants contend that Dr. Ingberman’s assumption that Homebuilder Plaintiffs’ indirect purchases from direct purchasing distributors “mirror exactly” the manufacturers’ direct sales to those distributors is not supported by any explanation as to why those two markets “would be the same, or even predictive of,” each other. (ECF 346, Reply re Ingberman at 4–5.) According to Defendants, Dr. Ingberman should not have estimated Homebuilder Plaintiffs’ damages using estimates of Defendants’ direct purchaser market share because “[t]he makeup of wallboard distributors is distinct from the makeup of the resellers and installers that eventually supply wallboard to the Homebuilders.” (Mot. re Ingberman at 13.)

Essentially, Defendants argue that calculating their shares of Homebuilder Plaintiffs’ purchases was based on speculation and unsupportable inference, and that there was actual data available to Homebuilder Plaintiffs from their suppliers that could have provided this information but was either not requested or not received and/or not made available to Dr. Ingberman. (Defs.’ Supp. Mem. re Ingberman at 3.) Homebuilder Plaintiffs did not, for example, “pull the transactions from the distributors to determine what manufacturer” shipped what purchase to what homebuilder. (Mot. re Ingberman at 10–11; Reply re Ingberman at 7–8.)

Defendants further assert that Dr. Ingberman’s method of estimating the total quantity of wallboard purchased by each Homebuilder Plaintiff, and his attribution of portions of that estimated quantity to specific manufacturers, is without any factual basis in the record. (Defs.’ Supp. Mem. re Ingberman at 1–3.) In addition, Defendants contend that the results from Dr. Ingberman’s decision to extrapolate market share data contradicts existing evidence. (Mot. re Ingberman at 14.)

## **2. Homebuilder Plaintiffs' Arguments**

Homebuilder Plaintiffs counter that, although they have not demonstrated that Dr. Ingberman's market share theory is commonly accepted, it is the only theory they can use if their theory of umbrella damages is not supported by sufficient evidence at trial or is not accepted by the trier of fact. Thus, Homebuilder Plaintiffs contend they can present it as an alternate theory of damages. Homebuilder Plaintiffs further contend that because Dr. Ingberman's calculations are based on the "best available data" and "accepted economic principles" of estimating unknown properties from incomplete data, his damages calculations are admissible. (ECF 334, Opp'n re Ingberman at 14, 16.)

Homebuilder Plaintiffs argue that there is a rational connection between Defendants' share of the direct purchasing distributor market and Defendants' share of Homebuilder Plaintiffs' drywall purchases because drywall is a commodity, its demand is inelastic, the market is an oligopoly, and Defendants have relatively high market shares. (*Id.* at 14 (quoting Ingberman Dep.)). Homebuilder Plaintiffs do not assert that Dr. Ingberman relied on any scientific or actual data, but contend that given his overall familiarity with the case, Homebuilder Plaintiffs' purchases, and Defendants' sales, of drywall, his estimates were reasonable. (Pls.' Supp. Mem. re Ingberman at 2–3.)

As to Defendants' argument that Dr. Ingberman's results contradict existing evidence, Homebuilder Plaintiffs respond that the resolution of this type of conflicting evidence is for the jury to decide. (Opp'n re Ingberman at 17.)

Homebuilder Plaintiffs conclude their argument by asserting that:

The practicality of Dr. Ingberman's approach—namely, that manufacturer direct sales in each state mirror indirect sales to Plaintiffs in each state—is further supported by Dr. Ingberman's evaluation of the drywall industry in general. Dr. Ingberman testified extensively about the nature of the drywall market, including

that: (i) drywall is a commodity product; (ii) due to its size and weight; “[m]anufacturers rarely ship wallboard” long distances; and (iii) as a result of these shipping limitations and because it is a commodity product, Plaintiffs purchase drywall based on availability in their geographic region with no other preferences, other than that the drywall be produced domestically.

(Pls.’ Supp. Mem. re Ingberman at 3 (alteration in original) (footnotes omitted).)

## **V. Legal Standard: Admissibility of Expert Testimony**

The admissibility of expert testimony is governed by Rule 702, which provides that:

A witness who is qualified as an expert by knowledge, skill, experience, training, or education may testify in the form of an opinion or otherwise if: (a) the expert’s scientific, technical, or other specialized knowledge will help the trier of fact to understand the evidence or to determine a fact in issue; (b) the testimony is based on sufficient facts or data; (c) the testimony is the product of reliable principles and methods; and (d) the expert has reliably applied the principles and methods to the facts of the case.

Under Rule 702, a district court judge functions as a gatekeeper to “ensure that any and all scientific testimony or evidence admitted is not only relevant, but reliable.” Daubert v. Merrell Dow Pharma., Inc., 509 U.S. 579, 589 (1993). The Third Circuit has clarified that “in doubtful cases,” Rule 702 “favor[s] admissibility.” Linkstrom v. Golden T. Farms, 883 F.2d 269, 270 (3d Cir. 1989); see also Kannankeril v. Terminix Int’l, Inc., 128 F.3d 802, 806 (3d Cir. 1997) (“Rule 702 . . . has a liberal policy of admissibility.”). The “touchstone” for Rule 702 analysis is the broad helpfulness of the expert’s testimony to the trier of fact. Linkstrom, 883 F.2d at 270 (quoting Breidor v. Sears, Roebuck & Co., 722 F.2d 1134, 1139 (3d Cir. 1983)); see also Pineda v. Ford Motor Co., 520 F.3d 237, 243 (3d Cir. 2008) (“The Rules of Evidence embody a strong preference for admitting *any evidence* that may assist the trier of fact.” (emphasis added)).

On appeal, a district court judge’s conclusion on a Daubert challenge is reviewed for abuse of discretion and will be overturned only if the decision “rests upon a clearly erroneous finding of fact, an errant conclusion of law or an improper application of law to fact.” TMI Litig., 193 F.3d

at 666 (quoting Hanover Potato Prods., Inc. v. Shalala, 989 F.2d 123, 127 (3d Cir. 1993)). The Third Circuit will not interfere “unless there is a definite and firm conviction that the court below committed a clear error of judgment in the conclusion it reached upon a weighing of the relevant factors.” TMI Litig., 193 F.3d at 666 (quoting Hanover, 989 F.2d at 127).

Rule 702 imposes three requirements for admissibility of expert testimony: “(A) the proffered witness must be an expert, i.e., must be qualified; (B) the expert must testify about matters requiring scientific, technical or specialized knowledge; and (C) the expert’s testimony must assist the trier of fact.” Pineda, 520 F.3d at 244; see also Schneider ex rel. Estate of Schneider v. Fried, 320 F.3d 396, 404 n.3 (3d Cir. 2003) (noting that Rule 702 “was amended to include the trilogy of restrictions (qualifications, reliability, fit) in its text after the Supreme Court decided Daubert”).

#### **A. Qualification**

First, a witness must offer specialized expertise or experience to qualify as an “expert” under Rule 702. Id. at 404. The Third Circuit defines the qualification requirement “liberally,” allowing “a broad range of knowledge, skills, and training [to] qualify an expert.” Id. The liberal policy in favor of admissibility “extends to the substantive as well as the formal qualifications of experts.” Pineda, 520 F.3d at 244. A district court abuses its discretion if it “exclude[s] testimony simply because [it] does not deem the proposed expert to be the best qualified or because the proposed expert does not have the specialization that the court considers most appropriate.” Holbrook v. Lykes Bros. S.S. Co., Inc., 80 F.3d 777, 782 (3d Cir. 1996); see, e.g., Paoli, 35 F.3d at 753 (reversing district court’s conclusion that doctor offered as an expert was not qualified because the doctor, “while arguably a relatively poor clinician and less than fully credible witness, qualifie[d] as an expert” under the liberal standard for qualification). The result of the Third

Circuit’s liberal approach to admitting expert testimony under Rule 702 is that arguments regarding an expert’s qualifications generally relate to the weight to be given to the testimony—not to its admissibility. Holbrook, 80 F.3d at 782.

## **B. Reliability**

Second, for the testimony of a qualified witness to be admissible under Rule 702, the witness must use a methodology or technique that is reliable. Paoli, 35 F.3d at 742. The reliability inquiry requires evaluating if “the expert’s testimony is supported by ‘good grounds.’” Karlo v. Pittsburgh Glass Works, LLC, 849 F.3d 61, 81 (3d Cir. 2017). The Third Circuit has identified eight factors for district courts to consider in assessing whether “good grounds” support potential expert testimony:

(1) whether a method consists of a testable hypothesis; (2) whether the method has been subject to peer review; (3) the known or potential rate of error; (4) the existence and maintenance of standards controlling the technique’s operation; (5) whether the method is generally accepted; (6) the relationship of the technique to methods which have been established to be reliable; (7) the qualifications of the expert witness testifying based on the methodology; and (8) the non-judicial uses to which the method has been put.

Paoli, 35 F.3d at 742 n.8.

These reliability factors are not exhaustive and may not apply in every case. See Kumho Tire Co., Ltd. v. Carmichael, 526 U.S. 137, 141 (1999) (“Daubert’s list of specific factors neither necessarily nor exclusively applies to all experts or in every case.”). Indeed, the factors should not be applied rigidly because “[t]he inquiry envisioned by Rule 702 is . . . a flexible one.” Daubert, 509 U.S. at 594. However, “some analysis of these factors is necessary.” UGI Sunbury LLC v. A Permanent Easement for 1.7575 Acres, 949 F.3d 825, 834 (3d Cir. 2020).

The standard for determining reliability “is not that high . . . even given the evidentiary gauntlet facing the proponent of expert testimony under Rule 702.” TMI Litig., 193 F.3d at 665.

The court's focus in assessing reliability "must be solely on principles and methodology, not on the conclusions that they generate." Daubert, 509 U.S. at 595; see also Karlo, 849 F.3d at 81 ("The test of admissibility is not whether a particular scientific opinion has the best foundation, or even whether the opinion is supported by the best methodology or unassailable research."); Paoli, 35 F.3d at 744 ("A judge will often think that an expert has good grounds to hold the opinion that he or she does even though the judge thinks that the opinion is incorrect."). At the reliability phase of the Daubert analysis, "[c]ourts look for rigor, not mere 'haphazard, intuitive inquiry.'" UGI Sunbury, 949 F.3d at 834 (quoting Oddi v. Ford Motor Co., 234 F.3d 136, 156 (3d Cir. 2000)).

### **C. Fit**

Third, for reliable testimony to be admissible, Rule 702 requires that the testimony "fit" the facts and the context of the case in which it is offered. Daubert, 509 U.S. at 591. An expert's testimony fits the case if the testimony will "assist the trier of fact." Paoli, 35 F.3d at 743. Thus, the fit requirement "goes primarily to relevance." Daubert, 509 U.S. at 591; see also Dominguez v. Yahoo!, Inc., No. 13-1887, 2017 WL 390267, at \*14 (E.D. Pa. Jan. 27, 2017) (Baylson, J.) ("[T]o be admissible, the expert testimony must help the trier of fact understand the evidence or determine a fact issue."). Said differently, the fit requirement simply extends "the requirement of reliability, or 'good grounds,' . . . to each step in an expert's analysis all the way through the step that connects the work of the expert to the particular case." Paoli, 35 F.3d at 743. As an illustration of Rule 702's fit requirement, the Third Circuit described how "animal studies [would] be admissible to prove causation in humans" only if "there [were] good grounds to extrapolate from animals to humans." Id.

## **VI. Discussion**

### **A. Hall's Testimony Will Be Precluded**

Homebuilder Plaintiffs' Motion challenges Hall's testimony on all three prongs of the Daubert analysis: qualification, reliability, and fit. However, other conclusions the Court reached between the filing of Homebuilder Plaintiffs' Motion (July 2, 2018) and oral argument (January 9, 2020) altered the landscape of pertinent legal arguments. Following those conclusions, the key issue regarding Hall's testimony is the third prong of Daubert—the “fit” of his testimony to the facts of the case.

At the hearing and in their supplemental briefing, Homebuilder Plaintiffs argue that one of the Court's interim rulings, namely the Court's decision to apply California's Cartwright Act to the state law claims, obviates the relevance of Hall's testimony entirely. (See Pls.' Supp. Mem. at 2 (“[I]n light of the Court's July 24, 2019 order on choice-of-law, ruling that California's Cartwright Act applies to all of [Homebuilder] Plaintiffs' state law claims . . . Mr. Hall's testimony offered for the sole purpose of calculating downstream pass-through is no longer relevant to any issue in this case as a matter of law.”).) The importance of this line of argument only became clear *after* the Court decided the choice of law question in July 2019.

The Court agrees with Homebuilder Plaintiffs and will preclude Hall's testimony on grounds that it is not relevant as required by Daubert.

#### **1. The Pass-Through Defense**

Hall's Report and purported testimony concern downstream pass through; that is, the extent to which Homebuilder Plaintiffs passed on the conspiracy-induced drywall prices to homebuyers. The term “downstream pass through” is used because at this step in the distribution chain (the step from Homebuilder Plaintiff to homebuyer), the product is moving downstream towards the

consumer and ultimate purchaser. Whether Homebuilder Plaintiffs passed the price increases through to their buyers is germane because it may provide an affirmative defense—the “pass-through” defense. Defendants’ theory is that, although Homebuilder Plaintiffs may have initially paid an increased price for drywall as a result of the price-fixing conspiracy, they successfully “passed through” the price increases to their customers (the homebuyers), and therefore suffered no injury.

The availability of this defense is somewhat unsettled and may depend on whether the claim is brought under federal or state antitrust law. Because of these complexities, Defendants argue that Homebuilder Plaintiffs waived the issue by failing to raise it in a motion for partial summary judgment. (Defs.’ Supp. Mem. at 4.) However, after the parties submitted their post-hearing supplemental briefing, the Court allowed each party to submit an additional, separate memorandum devoted exclusively to explaining the party’s position on the legal availability of the pass-through defense under the law of California, which is the law that the Court determined governs Homebuilder Plaintiffs’ state law claims. The supplemental briefing on the legal availability of the pass-through defense (to which Hall’s testimony relates) enabled the parties to focus their arguments and the submissions fully apprised the Court of the relevant issues.<sup>26</sup>

## **2. Hanover Shoe and Clayworth**

The availability of the pass-through defense under California’s Cartwright Act is governed by the Supreme Court of California’s decision in Clayworth v. Pfizer, Inc., 233 P.3d 1066 (Cal.

---

<sup>26</sup> Because “[i]t is well established that a trial judge possesses the discretion to prohibit parties from raising matters they have failed to advance during the pretrial proceedings,” the trial court also has the discretion to consider arguments that were preserved but not actively litigated. Sample v. Diecks, 885 F.2d 1099, 1106 (3d Cir. 1989). This Court exercises that discretion here because both parties had the opportunity to set forth their substantive arguments regarding the availability of the pass-through defense.



2010). To appreciate the holding of Clayworth, it is important to first understand the Supreme Court’s rejection of the pass-through defense for claims brought under federal law in Hanover Shoe, Inc. v. United Shoe Machinery Corp., 392 U.S. 481 (1968).

Hanover Shoe concluded that “the buyer is equally entitled to damages if he raises the price for his own product” because “[a]s long as the seller continues to charge the illegal price, he takes from the buyer more than the law allows.” Id. at 489. In other words, a buyer that suffers an antitrust injury in the first instance but passes on the illegal price increase is nonetheless entitled to recover. See id. (“At whatever price the buyer sells, the price he pays the seller remains illegally high, and his profits would be greater were his costs lower.”). Stated simply, Hanover Shoe largely foreclosed the availability of a pass-through defense to antitrust claims brought under federal law. The Court carved out narrow exceptions to this general principle of unavailability; for example, where, “an overcharged buyer has a pre-existing ‘cost-plus’ contract.” Id. at 494.

Over forty years later, the Supreme Court of California examined whether the pass-through defense, which had been rejected by the Supreme Court for price-fixing claims brought under federal law in Hanover Shoe, is available for price-fixing claims brought under California state law. See Clayworth, 233 P.3d at 1072 (noting that the issue was “whether under the Cartwright Act an antitrust defendant can defeat liability by asserting a pass-on defense”). To answer this question, the Supreme Court of California reviewed Hanover Shoe, considered the text and legislative history of the Cartwright Act, and explored broader policy considerations. Id. at 1072–86. Clayworth ultimately held that:

For state antitrust purposes, the Hanover Shoe rule should apply even as indirect purchasers are allowed to sue. We therefore conclude, under the Cartwright Act as under federal law, that a pass-on defense generally may not be asserted. Instead, in an antitrust price-fixing case, the presumptive measure of damages is the amount of the overcharge paid by the plaintiff.

Id. at 1086. Two exceptions apply to the general rule that the pass-through defense is unavailable under the Cartwright Act: (a) cases involving “‘cost-plus’ contracts” and (b) cases where application of the defense is necessary “to avoid duplication in the recovery of damages.” Id.

### **3. Analysis**

The legal availability of the pass-through defense under California’s Cartwright Act is a foundational question. If the defense is not available, then Hall’s purported testimony, which focuses exclusively on downstream pass through, is completely irrelevant. As the Supreme Court noted in Daubert, “[e]xpert testimony which does not relate to any issue in the case is not relevant and, ergo, non-helpful.” 509 U.S. at 591.

The parties agree on this essential principle. (Pls.’ Supp. Mem. re Pass Through at 1; Defs.’ Supp. Mem. re Pass Through at 2.) However, they diverge in their conclusions on whether California permits a pass-through defense to antitrust claims brought under state law, and this divergence leads to differing conclusions on whether Hall’s testimony is relevant. The Court concludes that because Clayworth bars the pass-through defense, Hall’s testimony is not responsive to any legal issue, and therefore his testimony must be precluded under Daubert.

Clayworth unambiguously forecloses use of the pass-through defense except in the two narrow situations noted by Supreme Court of California (i.e., cost-plus contracts and duplicative recovery). The Clayworth opinion leaves no room for doubt that the pass-through defense is generally unavailable under the Cartwright Act. See 233 P.3d at 1086 (“[U]nder the Cartwright Act as under federal law, . . . a pass-on defense generally may not be asserted.”). Moreover, as Homebuilder Plaintiffs point out, courts applying Clayworth have overwhelmingly recognized that, unless one of the two exceptions applies, Clayworth is a bar to a defense based on the purported pass through of a price increase. See, e.g., Tawfilis v. Allergan, Inc., No. 15-307, 2017

WL 3084275, at \*10 (C.D. Cal. June 26, 2017) (citing Clayworth for the proposition that “[a pass-through defense] is unavailable under either the Sherman Act, Hanover Shoe . . . , or the Cartwright Act”); Cty. of San Mateo v. CSL Ltd., No. 10-5686, 2014 WL 4100602, at \*5 (N.D. Cal. Aug. 20, 2014) (“Clayworth adopted the Hanover Shoe rule, which bars antitrust defendants from asserting the affirmative defense that direct purchasers who pass on an overcharge cannot sue for damages.”); In re Refrigerant Compressors Antitrust Litig., No. 09-2042, 2013 WL 1431756, at \*10 (E.D. Mich. Apr. 9, 2013) (noting that the question in Clayworth was whether “the Cartwright Act permits a pass-on defense or whether, like federal law, it precludes it” and that the Clayworth court concluded pass through is generally unavailable as a defense); In re TFT-LCD (Flat Panel) Antitrust Litig., No. 07-1827, 2012 WL 6709621, at \*2 (N.D. Cal. Dec. 26, 2012) (permitting the defendant to proceed with the pass-through defense because “there [wa]s a very real prospect of duplicative recovery,” and therefore the case fit Clayworth’s second exception).

As recognized by subsequent courts, the plain language of Clayworth bars pass-through defenses. The Supreme Court of California’s unequivocal statement that an alleged antitrust violator cannot defend on the basis of the plaintiff’s pass through compels this Court to reject Hall’s testimony as not relevant to any live legal issue in the case. Defendants articulate two reasons why Hall’s testimony is relevant under Daubert, but neither argument persuades the Court.

First, Defendants attempt to distinguish downstream pass through as a defense to liability from downstream pass through as an offset of damages. (Defs.’ Supp. Mem. re Pass Through at 3.) Defendants assert that because they seek to use downstream pass through to reduce damages—not to bar liability—Clayworth is not an impediment. (*Id.*) However, this distinction is unsupported by either Clayworth or Hanover Shoe. To the contrary, Clayworth suggests its rejection of the pass-through defense applies to damages. See 233 P.3d at 1086 (“[I]n an antitrust

price-fixing case, the presumptive measure of *damages* is the amount of the overcharge paid by the plaintiff.” (emphasis added)).

Second, Defendants argue that even if the pass-through defense is not available for Homebuilder Plaintiffs’ Cartwright Act claims, it is relevant to Homebuilder Plaintiffs’ claims under California’s Unfair Competition Law (“UCL”). (Defs.’ Supp. Mem. re Pass Through at 5.) Specifically, Defendants point to a portion of Clayworth discussing standing under the UCL stating “[t]hat a party may ultimately be unable to prove a right to damages . . . does not demonstrate that it lacks standing to argue for its entitlement to them.” 233 P.3d at 1087. Shortly after Clayworth was decided, the Supreme Court of California issued its decision in Kwikset Corp. v. Superior Court, 246 P.3d 877 (Cal. 2011), a case brought under the UCL. The Kwikset court rejected an argument raised by the defendant-manufacturer that the court characterized as a “pass-on defense in disguise.” Id. at 893. Kwikset explained that “in the eyes of the law, a buyer forced to pay more than he or she would have is harmed at the moment of purchase, and further inquiry into such subsequent transactions, actual or hypothesized, ordinarily is unnecessary.” Id. (footnotes omitted). Although Defendants correctly note that the factual context is very different here, the Court cannot ignore the unmistakable language of Kwikset.<sup>27</sup>

In summary, the unavailability of the pass-through defense is inescapable given the clear language of Clayworth. The distinction Defendants attempt to draw between liability and damages

---

<sup>27</sup> Defendants reference Elite Logistics Corp. v. MOL America, Inc., No. 11-2952, 2016 WL 409650 (C.D. Cal. Feb. 2, 2016). In that case, the court was “not persuaded by [the] suggestion that the Kwikset court imposed a general bar on pass-on defenses, or even a bar in all UCL cases.” Id. at \*3. But in a previous opinion in that case, the Elite court cited Kwikset for the proposition that “the California Supreme Court has rejected such . . . ‘pass-on’ defenses, even outside the antitrust context.” Elite Logistics Corp. v. MOL Am., Inc., No. 11-2952, 2013 WL 4601237, at \*4 (C.D. Cal. Aug. 29, 2013). The Court agrees with the first conclusion reached by Judge Pregerson in Elite.

is unsupported by Clayworth, and Defendants’ invocation of Homebuilder Plaintiffs’ UCL claim does not require a different conclusion because Kwikset makes clear that the ban on pass-through defenses also applies to UCL claims. Because the pass-through defense is generally unavailable under California law,<sup>28</sup> Hall’s testimony—which focuses entirely on downstream pass through—does not have “the ‘potential for assisting the trier of fact.’” United States v. Schiff, 602 F.3d 152, 173 (3d Cir. 2010) (quoting Kannankeril, 128 F.3d at 806). Hall’s testimony therefore fails to satisfy the “fit” prong of the Daubert analysis and must be precluded under Rule 702.

**B. Dr. Willig’s Testimony Will Not Be Precluded**

Homebuilder Plaintiffs’ attacks based on cointegration, and their attacks on Dr. Willig’s choice not to use the first differences method, converge, and so they can be analyzed together. Overall, Homebuilder Plaintiffs seek to preclude Dr. Willig’s testimony by transmuting a few qualified statements into “damning” admissions of a “*fundamental flaw* in his methodology,” and as “Dr. Willig kn[o]w[ing] there was a test available to confirm the accuracy of his results [that] he failed to run.” (Pls.’ Supp. Mem. at 6–7 (emphasis in original).) Their theory, however, overstates the issues with Dr. Willig’s testimony, and in some respects is mistaken as to the basic issue.

The question is whether Dr. Willig’s analysis of cointegration, and therefore his forecasting model, is reliable. This is not the same inquiry as whether Dr. Willig has run every conceivable test for cointegration. Of course, even once Daubert reliability is established, Homebuilder

---

<sup>28</sup> As noted, Clayworth recognized two exceptions to the general rule of unavailability. Homebuilder Plaintiffs argue that it is undisputed neither exception is implicated here. (Pls.’ Supp. Mem. at 4; Pls.’ Supp. Mem. re Pass Through at 8.) Defendants do not agree or disagree, nor do they offer arguments under either exception.

Plaintiffs can argue that there were more, or better, tests that Dr. Willig should have run. But Homebuilder Plaintiffs will have to make those arguments to the trier of fact, not this Court.

The Court concludes that Dr. Willig's analysis of cointegration is reliable. To begin with, it is helpful to review one more time what tests Dr. Willig ran, and what his supposedly damning admissions about each were.

First, Dr. Willig ran the Kao and Pedroni tests. The parties agree that these would ordinarily be adequate cointegration tests. However, "in the presence of cross-sectional codependency," these tests may be "skewed towards finding the cointegrating relationship." (Mot. re Willig at 12 (quoting Willig Dep.)). Dr. Willig was not sure how severe that skew was. (Mot. re Willig at 12 (quoting Willig Dep.)). Asked whether the panel data Dr. Willig used displayed "ha[d] cross-sectional [co]dependency," Dr. Willig acknowledged that there were "signs of it." (Mot. re Willig at 11 (quoting Willig Dep.)). At one point, asked to confirm whether there was "an issue about whether [the Kao and Pedroni tests] accurately" assess cointegration, Dr. Willig responded, "I think that's fair." (Mot. re Willig at 11 (quoting Willig Dep.)).

Second, Dr. Willig ran the Westerlund test.<sup>29</sup> During his deposition, he admitted that the Westerlund test only showed a cointegrating relationship when run with longer time lags. When run with intermediate-term time lags, the test "couldn't affirmatively say yes, there is a cointegrating relationship that covers those intermediate lags." (Reply re Willig at 11 (quoting Willig Dep.)). Using both long-term and intermediate-term time lags "is the standard practice."

---

<sup>29</sup> Although Homebuilder Plaintiffs briefly complained of the timing of the Westerlund analysis at oral argument, Hr'g Tr. 76:21–77:1, neither Homebuilder Plaintiffs' reply brief nor their post-hearing supplemental briefing addresses the timeliness of the Westerlund analysis. The Court concludes that it is timely rebuttal testimony under Rule 26(a)(2)(D)(ii), as is Dr. Ingberman's attack on the Kao and Pedroni tests at his deposition.

(Reply re Willig at 11 (quoting Willig Dep.).) He found the results from the Westerlund test to be “not perfect, but it’s encouraging.” (Reply re Willig at 10 (quoting Willig Dep.).)

Third, Dr. Willig believes that since empirical evidence shows that demand and price are highly correlated and move together, and since economic theory generally expects supply, demand, and price to move together, his data should be cointegrated.

Together, these three analyses are sufficient to show that Dr. Willig’s methods are reliable enough for admission. For an expert’s opinion to be reliable, “[t]he grounds for the expert’s opinion merely have to be good[;] they do not have to be perfect.” Paoli, 35 F.3d at 744. Here, Dr. Willig has used three different methods to assess the cointegration of his data. Collectively, the three analyses demonstrate reliability, even if each may have individual flaws.

Homebuilder Plaintiffs have not shown otherwise. As to the Kao and Pedroni tests, all Homebuilder Plaintiffs have demonstrated is that there is an “issue” about whether the Kao and Pedroni tests may be “skewed” in Defendants’ favor to an unknown extent based on codependency, which the data shows “signs” of. As to the Westerlund test, Homebuilder Plaintiffs have demonstrated that it did not affirmatively demonstrate cointegration when run using intermediate time-lags. And Homebuilder Plaintiffs have possibly shown that Dr. Willig’s results could be considered more reliable had he also used the first-differences method as an additional check for cointegration. The facts, however, that there are “signs” that one method may yield “skewed” results, or that another method does not yield “perfect” results, or that there was an additional means of assessing reliability that Dr. Willig did not apply, are not enough to make Dr. Willig’s testimony unreliable.

Homebuilder Plaintiffs also complain that Dr. Willig’s early deposition testimony, asserting that his methods were reliable, was premised on his mistaken assumption that he had

used the first differences methodology. (Pls.’ Supp. Mem. at 7–8.) However, Dr. Willig stood behind the reliability of his methods even after being reminded that he did not use the first differences methodology. To the extent that Homebuilder Plaintiffs wish to explore the purported tension between the “testimony given after he corrected the record, seeking to now downplay the significance of the first difference test” and “his earlier admissions,” (Pls’. Supp. Mem. at 8), that exploration must occur at trial.

Finally, contrary to Homebuilder Plaintiffs’ position, admitting Dr. Willig’s testimony is consistent with this Court’s decision in Dominguez. Dominguez barred expert testimony on the grounds that the experts’ hypotheses were literally untestable: the software at issue was “no longer operable, and could not be resuscitated, [which] basically prevented any expert, no matter how qualified” from testing it. Dominguez, 2017 WL 390267, at \*19–20. By contrast, Dr. Willig’s testimony was testable and tested. Homebuilder Plaintiffs’ quarrel is with the choice of tests. For the reasons already discussed, that is a matter for a trier of fact, not for Daubert.

### **C. Dr. Ingberman’s Testimony Will Not Be Precluded**

#### **1. Proving Damages at Trial**

Defendants challenge one aspect of the report of Dr. Ingberman, who Plaintiffs intend to call as a damages expert. As a preamble to the discussion of Defendants’ Daubert objection to Dr. Ingberman’s proposed testimony, the Court will describe how Homebuilder Plaintiffs will likely present the factual and expert bases for their damages claim.

As the Third Circuit has held, Homebuilder Plaintiffs have a less rigorous burden to prove damages in an antitrust price-fixing case than they do to prove the existence of a price-fixing agreement, or that Homebuilder Plaintiffs suffered economic injury because of artificially increased price levels. LePage’s Inc. v. 3M, 324 F.3d 141, 166 (3d Cir. 2003) (en banc) (citing



Bonjorno v. Kaiser Aluminum & Chem. Corp., 752 F.2d 802, 812–13 (3d Cir. 1984)).

Accordingly, this Court is under an obligation to be more “liberal” in the admissibility of evidence as to the amount of damages, and in considering the legal sufficiency of damages evidence. This lower standard applies to expert testimony as well as fact evidence.

In a general sense, the measure of damages in a price-fixing case is the increased cost that a purchaser paid because of the agreement to raise prices. In the drywall industry, because Homebuilder Plaintiffs have testified that they frequently do not know the manufacturer of the drywall that they have purchased,<sup>30</sup> and because they were indirect purchasers, proving damages is likely to be a two-step process.<sup>31</sup>

The first step of proof will come from Homebuilder Plaintiffs themselves, who can testify, from personal knowledge and their own business records (or from Defendants’ data produced during discovery), of the quantity and cost of drywall each of them purchased. This data is already in the record, and is not in dispute. The second step will likely come from an expert, in this case Dr. Ingberman. Homebuilder Plaintiffs have presented Dr. Ingberman’s expert opinion that uses a regression to estimate damages and tabulates those estimates in various ways.

---

<sup>30</sup> Defendants have asserted that the drywall purchased always shows the identity of the manufacturer. This is a disputed factual issue for trial. For purposes of this Motion, the Court assumes Homebuilder Plaintiffs were unaware of the manufacturer of their drywall purchases.

<sup>31</sup> The Umbrella Damages Opinion may allow Homebuilder Plaintiffs to proceed without identifying the specific manufacturer from whom they purchased. Under an umbrella damages theory, as applied to proof of damages, each Homebuilder Plaintiff can prove damages based on its overall purchases of drywall, without regard to the identity of the manufacturer, if the evidence shows that the nonconspiring manufacturers raised their prices because of the price-fixing conspiracy. Mid-West Paper Prods. Co. v. Cont’l Grp., Inc., 596 F.2d 573, 584 n.45 (3d Cir. 1979).

To account for the possibility that there may not be umbrella damages in this case, Dr. Ingberman's report estimates damages for each Defendant based on what market share a particular Defendant had of the overall drywall sales during a specific year. Thus, if a specific Homebuilder Plaintiff shows that it purchased 100,000 square feet of drywall during a specific year, but is unable to prove the identity of the manufacturer of that drywall, then that Homebuilder Plaintiff intends to have Dr. Ingberman testify, as an expert, as to his estimate of the market share that the Defendant (either L&W or PABCO) possessed, and calculate damages based on that market share.

For example, if L&W had 25% of the overall U.S. sales of drywall in a particular year, then the Homebuilder Plaintiff could use that 25% share to estimate the quantity of drywall that they purchased from L&W (by applying it to the 100,000 square feet of drywall they purchased), and compute its compensable damages. That volume estimate would then be multiplied by the overcharge amount, to reach the amount of damages recoverable by that Homebuilder Plaintiff from L&W.<sup>32</sup> The same method could be replicated to estimate damages against PABCO.

## **2. Dr. Ingberman's Market Share Testimony**

As an initial matter, the Court rejects Homebuilder Plaintiffs' arguments that Defendants' contentions are mooted by this Court's ruling on umbrella damages. (Pls.' Supp. Mem. 9–10.) The Court's ruling on umbrella damages was without prejudice. Defendants, therefore, can raise the issue again at trial if the evidence adduced fails to prove Homebuilder Plaintiffs' theory. (Umbrella Damages Opinion at 22.) The Court's ruling was also without prejudice as to Homebuilder Plaintiffs, so if their theory of umbrella damages does not prevail, they may present an alternate theory of damages. Because Homebuilder Plaintiffs still need to prove their umbrella

---

<sup>32</sup> Those Defendants who have already settled, of course, cannot be held liable at the upcoming Homebuilder Plaintiffs' trial. However, the prices they charge for drywall may be admissible at trial.

damages theory at trial, Defendants' Motion to Preclude Dr. Ingberman's market share estimates is not moot.

As for the substance of Defendants' Daubert motion, although Defendants have some support for their argument that mismatched market share estimates are inherently suspect, the Court will not accept Defendants' arguments to preclude Dr. Ingberman's reliance on market share estimates if Homebuilder Plaintiffs' theory of umbrella damages is not accepted by the trier of fact. Defendants agree that estimates are not per se prohibited from use by appropriately qualified expert witnesses, (Reply re Ingberman 2), and Dr. Ingberman has used some market data to make his conclusions about market shares.

When deciding questions of reliability, "the trial judge [has] considerable leeway in deciding in a particular case how to go about determining whether particular expert testimony is reliable." Kumho, 526 U.S. at 152. This is especially true when ruling on issues related to damages. Cf. Halo Elecs., Inc. v. Pulse Elecs., Inc., 136 S. Ct. 1923, 1934–35 (2016) (upholding the district court's discretion to award enhanced damages in Patent Act cases).

The Supreme Court's interpretation of the Patent Act in Pulse is of some resonance in an antitrust case where damages are also often complex to calculate. This is particularly true in antitrust cases where there are, as in this case, multiple and complex channels of distribution. Damages in these cases are not easy to compute, and, as noted above, the Court must be "liberal" in ruling on admissibility.

In ZF Meritor, LLC v. Eaton Corp., 696 F.3d 254 (3d Cir. 2012), the Third Circuit reaffirmed this liberal view of the admissibility of damages evidence, especially in circumstances in which the plaintiff will be unable to prove damages without it. ZF Meritor was an antitrust case in which the defendant's anticompetitive conduct foreclosed a substantial share of the market to

competitors. Id. at 263. The district court excluded the plaintiffs’ expert’s testimony estimating damages because the expert impermissibly relied on the plaintiffs’ internal market share and profit margin projections. Id. at 267. The district court also denied the plaintiffs’ request for permission to amend the expert’s report to estimate damages with an econometric model that did not rely on the plaintiffs’ projections, but instead relied on external sources to estimate market share. Id. at 267–68, 295. Without the expert’s testimony, the plaintiffs were unable to prove damages, resulting in a damages award of \$0. Id. at 268.

The Third Circuit reversed the district court’s decision not to permit the expert to use his econometric model to estimate market share mainly because of “the critical nature of the evidence, and the consequences if permission to amend [wa]s denied.” Id. at 299. The same would be true here if the Court were to preclude Dr. Ingberman’s market share testimony. “[I]n the antitrust context, a damages award not only benefits the plaintiff, it also fosters competition and furthers the interests of the public by imposing a severe penalty (treble damages) for violation of the antitrust laws.” Id. at 300 (citing Hawaii v. Standard Oil Co. of Cal., 405 U.S. 251, 262 (1972)). As Defendants admit, “Dr. Ingberman’s estimate of market share is Homebuilders’ only avenue for presenting purported evidence of how much wallboard they bought from any particular defendant or from the allegedly conspiring defendants as a group.” (Defs.’ Supp. Mem. re Ingberman at 4.) In other words, if Homebuilder Plaintiffs’ theory of umbrella damages does not prevail at trial, then without Dr. Ingberman’s estimates, “not only will [Homebuilder] Plaintiffs be unable to recover for the antitrust injury [Defendants] caused, the policy of deterring antitrust violations through the treble damages remedy will also be frustrated.” ZF Meritor, 696 F.3d at 300 (citing Paoli, 35 F.3d at 750). This weighs strongly in favor of admitting Dr. Ingberman’s market share estimates.

Defendants do not cite any Third Circuit precedent rejecting estimates made by an expert with the type of experience that Dr. Ingberman developed from working on this case. Nor have Defendants shown any Third Circuit precedential holding that forbids experts from relying on estimates that they have arrived at based on their study of a particular industry or a particular market. Instead, there is precedent in the Third Circuit that approves of courts admitting reasonable estimates made by an expert who has familiarity with the overall topic and the facts of the case. See Schneider, 320 F.3d at 406 (permitting an invasive cardiologist to testify as an expert about drug prescriptions during surgical procedures because his “experience render[ed] his testimony reliable”).

The Court finds that Dr. Ingberman’s opinion is reliable and will be helpful to the ultimate trier of fact, subject to arguments at trial about his credibility, and the jury’s determination of what weight to give to his testimony and to that of Homebuilder Plaintiffs themselves. Hearing Dr. Ingberman’s testimony and assessing any potential flaws will be “an important part of assessing what conclusions [are] correct,” and may provide, at a minimum, a useful starting point for determining the damages attributable to each Defendant. Paoli, 35 F.3d at 744–45. At bottom, Defendants’ arguments go to the weight of Dr. Ingberman’s opinion, and are not grounds to preclude his testimony.

Here, Dr. Ingberman has developed an extensive familiarity with the topics of this case, and the drywall industry generally, from drafting his two highly detailed expert reports. Based on the long list of materials Dr. Ingberman relied upon to draft his reports, (Ingberman FoI, Attach. C), and complemented by his experience as an expert in other antitrust cases, (Ingberman FoI, Attach. A), the Court is satisfied that Dr. Ingberman has become well-informed on the drywall industry, and has based his estimates on his experience in the field. Considering Dr. Ingberman’s

familiarity with the drywall industry and his background in antitrust cases, the Court finds that his method of estimating Defendants' market share is reliable. See CB Aviation, LLC v. Hawker Beechcraft Corp., No. 10-1411, 2011 WL 5386359, at \*6 (E.D. Pa. Nov. 8, 2011) (DuBois, J.) (permitting an expert in aircraft appraisals to make market value estimates because his estimates were "based on extensive experience and [were] thus reliable"); Floorgraphics, Inc. v. News Am. Mktg. In-Store Servs., Inc., 546 F. Supp. 2d 155, 172–73 (D.N.J. 2008) (Hughes, M.J.) (admitting an expert's damages estimates even though the expert did not adjust his estimates to account for factors that may have changed the results).

This Court is satisfied that Dr. Ingberman has diligently attempted to use the best available data, and his reliance on his own subjective estimates is not necessarily, in these circumstances and under settled law on calculating damages in antitrust cases, inadmissible. Defendants' Motion to Preclude Dr. Ingberman's market share estimates will be denied.

## **VII. Conclusion**

For the foregoing reasons, Homebuilder Plaintiffs' Motion to Preclude the Testimony of Defendants' Expert, David Hall, (ECF 321), is granted and Hall will be precluded from testifying at trial. Homebuilder Plaintiffs' Motion to Preclude the Testimony of Defendants' Expert, Dr. Robert Willig, (ECF 320), and Defendants' Motion to Preclude the Testimony of Homebuilder Plaintiffs' Expert, Dr. Daniel Ingberman, (ECF 319), will both be denied, and Dr. Willig and Dr. Ingberman may testify at trial.

An appropriate Order follows.